minate, and the venules on the outer side of the splenic grains: that the venous membrane, which is continued from the cells to the cellules, as well as to the venules, becoming more and more attenuated, but without changing its essential structure, gradually loses its tubular form, and resumes its primitive character of cellular tissue; and that the artery, in like manner, is limited in its distribution within the granules by a cellular structure, which becomes vicarious of it, and determines the function it has to perform.

The author, in conclusion, offers some observations on the probable functions of the spleen. He considers the opinion which supposes that organ to be distended, at particular times, with arterial blood, as being completely refuted by the evidence derived from the preceding account of its minute structure; and suggests the probability of the spleen being rather a diverticulum for venous blood.

The paper is accompanied by seven highly finished drawings illustrating the structures described.

9. "Additional Experiments on the formation of Alkaline and Earthy Bodies by chemical action when carbonic acid is present." By Robert Rigg, Esq., F.R.S.

The author gives a detailed account of several experiments in which sugar, water, and yeast only were employed, and from which he deduces the conclusion that alkaline and earthy matters are formed by chemical action. In one set of experiments, some of which were made in silver, others in china, and others in glass apparatus, after the vinous fermentation had gone on during five days, the quantity of ashes obtained was, in the silver apparatus eighteen, in the china nineteen, and in the glass fifteen times greater than the previous quantity. A further examination of these ashes showed that they consisted of potass, soda, lime, and a residue not acted upon by muriatic acid. The author states that, however irreconcilable to our present chemical knowledge this important conclusion may at first sight appear, yet when it is taken in connexion with the decomposition of other vegetable matter, and with the phenomena which accompany the growth of plants, it may not excite surprise; and may be regarded as in harmony with the phenomena of natural science. He concludes by offering suggestions towards extending the inquiry into the subject of the formation of bones of animals by the action of the powers inherent in their organization.

10. "On the Difference of Colour in different parts of the Bodies of Animals." By James Alderson, M.A., M.D., late Fellow of Pembroke College, Cambridge. Communicated by P. M. Roget, M.D., Sec. R.S., &c.

The hypothesis advanced by the author in explanation of the well-known partial absence of the coloured pigment or *rete mucosum*, in different parts of the human body, and that of other animals, is that it is due to the union or adhesion of the epidermis and the true skin, so as to exclude the rete mucosum. He supports this hypothesis by the analogy of a cicatrix, which is the result of an organization of a